

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
4 August 2005 (04.08.2005)

PCT

(10) International Publication Number  
**WO 2005/070452 A2**

(51) International Patent Classification<sup>7</sup>: A61K 39/02

(21) International Application Number:  
PCT/US2005/000482

(22) International Filing Date: 7 January 2005 (07.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/535,454 8 January 2004 (08.01.2004) US

(71) Applicant (for all designated States except US): IDAHO  
RESEARCH FOUNDATION, INC. [US/US]; Morrill  
Hall 103, University of Idaho, Moscow, ID 83844-3003  
(US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): BOHACH, Gregory,  
I. [US/US]; 300 Rose Court, Moscow, ID 83844 (US).

(74) Agent: BRUESS, Steven, C.; Merchant & Gould P.C.,  
P.O. Box 2903, Minneapolis, MN 55402-0903 (US).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SI, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NI, SN, TD, TG).

**Published:**

— without international search report and to be republished  
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: METHODS FOR REDUCING SOMATIC CELL COUNT IN MILK

(57) **Abstract:** In an embodiment, the present invention is directed to a method of reducing the somatic cell count in milk including administering an effective amount of a toxin to a mammal. In some embodiments, the toxin administered has a modified disulfide loop region. For example, at least 40% of the amino acid residues within the disulfide loop region are deleted in some embodiments. The mammal reacts to the administered toxin with an immune response. In an embodiment, the present invention is directed a method of increasing the quality of milk produced by mammals including administering an effective amount of a toxin to a mammal.

WO 2005/070452 A2